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ABSTRACT

This UNESCO newsletter contains six sections concerned with various aspects of population education. Section 1 deals with workshops for monitoring and evaluating population education programs. Section 2 evaluates the programs of six Asia-Pacific countries (China, Democratic People's Republic of Korea, India, Pakistan, Philippines, and Thailand). Section 3 discusses the development of and prospect for population education. Section 4 reviews three UNESCO manuals: "Evaluative Research in Population Education"; "Curriculum Development in Population Education: Abstract-Bibliography Series 6"; and "Learning Experiences in Population Education: Volumes I, II, and III." Section 5 presents formal and nonformal population prototype designs for research. Section 6 contains a list of materials available from China, India, Pakistan, and Socialist Republic of Viet Nam. (TRS)

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POPULATION EDUCATION

in Asia and the Pacific

NEWSLETTER

Number 23, 1986

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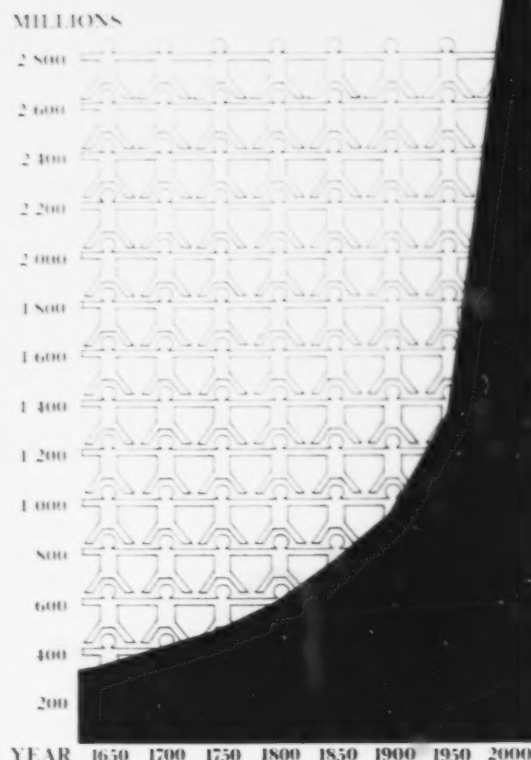
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GROWTH OF POPULATION IN THE REGION

From 1970 to 1978, the main concern in population education was its acceptability and feasibility as the education sector's contribution to a multi-disciplinary intervention strategy for curtailing unplanned population growth. From 1979 to 1985, the main focus of attention was accountability — to show the effects and impact of population education on the target clientele — in the formal and non-formal education sectors.

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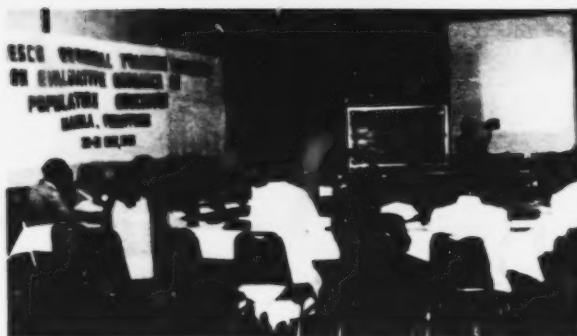
Population Education Programme Service

Unesco Regional Office for Education in Asia and the Pacific

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POPULATION EDUCATION REGIONAL NEWS

TRAINING WORKSHOP DEVELOPED DESIGNS AND INSTRUMENTS FOR MONITORING AND EVALUATING POPULATION EDUCATION PROGRAMME



The participants received lectures on monitoring and evaluative research designs, the various types of research designs, data analysis techniques and guidelines for writing a research report.

While population education programmes have been in operation in most of Asia for the last 15 years, few countries have really taken serious efforts to find out, whether or not, their set out goals and objectives for population education are being achieved. In general, country reports show that the extent of monitoring and evaluation undertaken has been inadequate and that little evaluative research has been done.

The reasons for this are many but few of them which could be addressed to immediately include the lack of expertise and non-availability of ready-made tests, questionnaires, evaluative research designs, etc., for ready use or adaptation by these countries.

To enhance the capabilities of the staff to undertake evaluation and monitoring of their population education projects and to develop and make available a ready-to-use pool of evaluative designs, tests and instruments for undertaking these various types of evaluation, a Regional Training Workshop on Evaluative Research in Population Education was organized by Unesco in collaboration with the Ministry of Education, Culture and Sports, Philippines, from 20 to 31 May 1985 in Manila.

Objectives

Twenty-five participants and resource persons from 14 countries in Asia attended the workshop. The workshop enabled them to exchange experi-



The participants were divided into two groups – the formal population education group developed three research designs, namely, pre-experimental, experimental and quasi experimental while the non-formal population education group developed two, namely experimental and quasi-experimental research designs.

ences in programme monitoring and evaluative research in population education. It also gave them training in the process of developing programme monitoring schemes and evaluative research designs and instruments, as well as the conduct of evaluative research and analysis of findings.

Workshop methodology

As a result of this training, the participants co-operatively developed programme monitoring schemes and various alternative research designs with accompanying data gathering instruments and data analysis techniques on different problem areas of population education.

Before the participants developed their instruments and designs, experts and resource persons presented lectures on monitoring schemes and evaluative research designs, using examples which had been used by some countries in evaluating their population education programmes.

The resource persons discussed the difference between monitoring and evaluation in the operational context. According to them, to monitor a programme is to collect information and make decisions chiefly in relation to programme implementation, including logistics. Evaluation, on the other hand, is the process of making judgements of worth and decisions on the basis of information collected for these purposes. The resource persons also identified the coverage or scope of monitoring vis-a-vis that of evaluation.

Lectures and discussions followed to discuss various ways of undertaking an evaluation. This also included an explanation of a research design and the various types of research designs, such as non-experimental, experimental and quasi-experimental — all described and illustrated in the context of population education.

Workshop outputs

After the lecture session, the participants were divided into two main working groups — formal and non-formal population education. The formal group developed three research designs, namely: non-experimental, experimental and quasi-experimental designs with accompanying data-gathering instruments and analysis techniques. The non-formal group developed an experimental and a quasi-experimental design with accompanying data-gathering instruments and analysis techniques.

The non-experimental design developed by the formal group was intended to ascertain the effects of the population education programme on the level of knowledge and attitudinal characteristics of the secondary school teachers teaching population education. It also specifically looked into determinants such as personal characteristics, professional background and environmental variables as they affect changes in their knowledge, attitudes and skills.

The experimental design looks into the relative effectiveness of two techniques in the teaching of population education to secondary school students, specifically comparing the effectiveness of lecture-discussion vis-a-vis teaching with slides on the knowledge and attitude of students. Lastly, the quasi-experimental design is aimed at comparing the effectiveness between traditional and innovative modalities in the in-service training of middle school teachers of population education in terms of changes in knowledge, attitude and teaching skills.

THE PACIFIC ALSO DESIGNS MECHANISM FOR EVALUATING NATIONAL POPULATION EDUCATION PROGRAMMES

Although population education programmes in the Pacific are relatively more recent than in Asia, the importance and value of instituting monitoring and evaluation mechanisms within national projects in population education has been recognized early as a result of lessons learned in Asia.

The experimental design developed by the non-formal group, is intended to assess the relative effectiveness of face-to-face training vis-a-vis teaching using self-instructional modalities for training teachers from rural areas to teach population contents in non-formal education programmes.

The quasi-experimental design is aimed at determining the effects of a non-formal population education programme on the knowledge of and attitude towards responsible parenthood family planning of adults attending literacy classes in Community X.

These prototype research instruments were pre-tested to sample target groups covering both in-school and out-of-school in a province in the Philippines, after which they were revised and improved.

To complete the training and develop the skills of the participants on all aspects of evaluation research, the last session of the workshop was devoted to lectures on alternative data analysis techniques such as tabulation, statistical analysis and the basics of reporting techniques. Five statistical techniques were described. These included T-test for matched groups, T-test for independent groups, Spearman rank correlation technique, Pearson product-moment correlation technique and Chi-square test. Guidelines were also developed in writing an evaluative research report.

A major outcome of the Regional Training Workshop was a manual intended for use by educators, particularly those involved in evaluative research in population education entitled, *Evaluative research in population education*. The workshop is also viewed as a spring-board towards revitalized monitoring, evaluation and evaluative research of country programmes in population education.

Following the response taken up by the Unesco Regional Office for Education in Asia and the Pacific to meet this problem, the Unesco Regional Population Education Programme in the Pacific also held a Regional Training Workshop in Population Education in the Pacific from 23 September to 1 October 1985 in Koror, Republic of Palau.



Mrs. Magdalena Dugenia, resource person, discusses various types of monitoring and evaluation designs for population education.



Participants present developed instruments on evaluating programme objectives, strategies, curriculum materials, teaching process and training and programme effectiveness.

Objectives

Like the training workshop held in Manila from 20 to 31 May 1985 and described in the preceding news article, the Pacific workshop was aimed at providing a forum for the exchange of experiences in population education, especially in relation to evaluation; providing training in the process of developing evaluation techniques and instruments for use in the countries, especially for curriculum materials, teaching/learning process, training and programme effects and providing training in data analysis techniques.

Directors or Co-ordinators of population education projects from Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Palau, Solomon Islands, Tonga, Vanuatu and Western Samoa attended the workshop.

Workshop methodology

The first part of the workshop was devoted to sharing of experiences, how meager they were, by the participants on evaluation activities they have undertaken. This was followed by a presentation from the resource person and a discussion on the various types of monitoring and evaluation of population education. As a result of this, the participants developed a framework for evaluating country programmes constituting of objectives, performance indicators, programme activity/content to be evaluated and corresponding evaluation design.

Output

The second part of the workshop enabled the participants to develop instruments on evaluating programme objectives, strategies for achieving programme objectives, curriculum materials, teaching/learning process, training and programme effects for both the in-school and out-of-school sectors.

The participants worked in groups to develop the following illustrative instruments to be used in evaluating the following various aspects of programme activities: (1) curriculum materials such as effectiveness of teachers' guides, student materials and out-of-school materials; (2) teaching/learning process such as the effectiveness of inquiry approaches, values clarification and audio-visual methods; (3) training programmes specifically the effectiveness of the process and effects; (4) programme effects in terms of impact of teaching various units on population education and use of posters on the changes of knowledge, attitude and skills both in the in-school and out-of-school audiences respectively.

Finally, the participants were exposed to data analyses techniques. The presentation covered the following steps: (1) organization of data making use of frequency distribution and categorization; (2) computation data utilizing measures of central tendency, measures of variability and measures of association; (3) presentation of data through tables, graphs and polygons; (4) interpretation of data; (5) drawing of conclusions; (6) making recommendations and (7) writing reports of evaluation studies.

ATTACHMENT PROGRAMME ON POPULATION EDUCATION DOCUMENTATION AND INFORMATION SERVICES

Six countries which are establishing their population education collection or information resource bases within their national population education projects sent their personnel in charge of this activity for on-the-job training at the Unesco Population Education Clearing House, Bangkok from 1-30 November 1985.

These interns included Mrs. Ana Efie Nafisah Salina of the National Family Planning Co-ordinating Board of Indonesia, Mr. Shankar Nath Adhikaree of Kaiser Library, Nepal, Mr. Farooq Qureshi and Miss Naveeda Siddiqui of the Ministry of Education, Pakistan, Mrs. Pushpa Jayakody of the Ministry of Education, Sri Lanka and Miss Arinade Akomolafe of the Comprehensive Population Education Programme of Nigeria.

They comprise the latest batch of trainees in addition to the rest who have undergone attachment with Unesco Population Education Clearing House to provide them systematic training in establishing and running their population education documentation or clearing house activities.

The attachment programme more specifically enabled them to develop expertise in the collection, analysis, processing, retrieval and selective dissemination of information and materials for both in-school and out-of-school programmes.



To prepare the interns on the theoretical aspect of documentation, lectures and discussions were held on how to classify and organize population education materials more systematically and how to process and repackage technical information into more understandable and usable forms.

The end goals of these series of training programmes are to stimulate the flow and use of population education materials at the national level and to enhance inter-country exchange of materials and information in the region to facilitate more effective and successful implementation of national population education projects.

Before the participants were grounded with knowledge and techniques on library, documentation and information services, they were first exposed to comprehensive information about the subject matter, i.e., population education.

After being equipped with a very good understanding of population education, its scope of contents, objectives and audience coverage, the participants received lectures, self-instructional modules and underwent exercises and activities on the various aspects of the training programme.

As a result of the one-month attachment programme, the trainees learned the following skills: (1) how to formulate an acquisitions policy, acquire books and build a population education collection; (2) classify and catalogue knowledge base and population education materials including audio-visual aids; (3) how to assess the quality of population education materials; (4) how to conduct literature search and answer requests for



One of the practical exercises that the participants undergo is to retrieve information and be able to select only those which are unambiguously pertinent and useful in response to specific requests and for selective dissemination of information.

materials; (5) how to write abstracts; (6) how to transform and repackage technical information into readable forms such as bibliographies, newsletters, packages, handbooks, literature reviews, etc.; (7) how to formulate and undertake dissemination strategies and (8) how to develop plans for establishing and running a documentation or information services on population education.

The concrete outputs of the attachment programme came in the forms of abstract-bibliogra-

phies, newsletter, acquisitions lists, handbook for teacher training and manual for integrating population education into science. All of the interns also developed plans and activities for establishing and running their respective population education documentation or information activities.

All of these outputs will be of immediate use to the respective national population education projects in the six countries where the interns came from.

POPULATION EDUCATION COUNTRY PROGRAMMES

CHINA

Population Education through Peasant Schools

A project to introduce population education in the Counties' Agricultural Schools and at commune levels under the Peasant's Education Programme was recently launched in China.

To develop the knowledge and skills of those persons in charge of ensuring the integration of population education into three peasant schools, a national training workshop was held from 5 to 15 August 1985 in Changsha, Hunan province.

Twenty participants from five County Agricultural and Peasant's Schools attended the national training workshop. Seven local resource persons and a Unesco specialist also participated in the training workshop.

Eighteen topics were discussed during the training workshop. These topics include population education concept, nature, goal and scope; demographic trends in Asia; demography in population education; curriculum development in out-of-school population education; materials development in out-of-school population education, population, resources and environment; population, agriculture and food supply; adoption of popu-

lation education as an innovation; development of out-of-school population education in Asia and research and evaluation in population education.

After the presentation of lectures and discussions, the participants developed lesson plans for trial teaching on selective areas. Three such trial teaching sessions were organized, followed by critique and discussions.

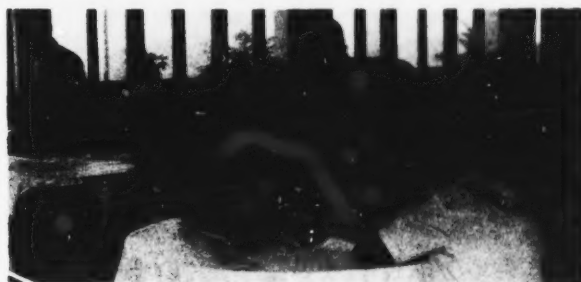
National Training Produced Monitoring and Evaluative Designs in Population Education

A national training programme on monitoring, evaluation and evaluative research was organized at the Teacher Educator's Sanitarium, Xincheng County, Liaoning Province from 15 to 30 July 1985. Fifty-five participants from provincial/municipal education bureaux, pedagogical institutes and middle schools took part in the national training programme.

The training programme was aimed at developing the knowledge and skills of those involved in population education to enable them to evaluate their various population education activities and the impact of the programme as a whole.

The following topics were discussed: programme monitoring, monitoring the implementation of population education in China, basic evaluation concepts and designs, evaluating curriculum materials, training and teaching/learning process evaluation of learning outcomes (both cognitive and affective) and evaluative research designs in population education.

In addition to basic evaluation designs, the participants were also exposed to data analysis techniques focusing on tabulation of data and measures of central tendency, measures of variability, measures of correlation, t-test tests and



The participants were divided into groups to develop evaluative research designs with appropriate instruments.

chi square. To make the training as complete as possible, the participants were also presented with guidelines on how to prepare an evaluative research report.

For the practicum session, the participants were divided into three groups to develop evaluative research designs with appropriate research instruments. Group One, consisting of instructors in Pedagogical Institutes, developed a research design on the comparative effectiveness of selected training modalities. Group Two, composed of teachers in middle schools, developed an evaluative research design on the effects of population education on middle school students. Finally, Group Three composed of officials from Provincial Education Bureaux developed monitoring and evaluation schemes.

To test the viability of the evaluative research instruments developed, the participants tried out the instruments in two schools in Liaoning Province.

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

Study Tour Undertaken to Launch Population Education Programme

Two educationists from the Democratic People's Republic of Korea undertook a study tour of the Philippines and India from 1 to 17 November 1985 to learn from the experiences of the two countries' national population education programmes. The main objective of the study tour was to train a team of resource persons from the Democratic People's Republic of Korea who can plan and carry out training of personnel both for the in-school and out-of-school population education at the national level.

In the Philippines, the two Korean educationists visited the Population Education Programme of the Ministry of Education, Culture and Sports and other agencies which are undertaking population education programmes such as the Commission on Population, Population Center Foundation, Legarda Youth Center, Bureau of Youth Welfare and Bureau of Continuing Education. They also visited schools and observed actual teaching of population education in the classroom.

In India, the study tour covered the following organizations: National Population Education Project at the National Council for Educational Research and Training (NCERT), Directorate of Adult Education, Family Planning Association of

India and a visit to a Population Education Cell of the State Council for Educational Research and Training in Delhi.

The programmes that were observed focused on those which dealt with teachers/field-workers training in order to enhance the competencies of the two Korean educationists in planning and carrying out training programmes in population education in their countries.

During the visits to different organizations engaged in planning and implementing population education and related programmes, the participants were briefed about the background, purposes, achievements, strengths and weaknesses of their programmes. The briefings were generally followed by group discussions, during which various operational strategies, problems and issues were further clarified.

It is hoped that when the participants return to their country, the lessons learned from the study tour can help them organize a training programme on population education more efficiently and systematically.

INDIA

State-level Population Education Programmes at Full Speed

Ajmer regional workshop for teacher educators

A regional workshop for teacher educators was held from 9 to 14 September 1985 at the Regional College of Ajmer to produce adequate instructional materials on population education for the key teachers educators of Secondary Teacher Training Institutes.

Participants representing different disciplines/population studies, education, biology, medicine and social sciences, coming from different states of the region attended the workshop.

To enable the participants to understand and appreciate the objectives and goals of population education, various lectures were presented to them. These dealt on population issues and problems, population education and its interrelationships with various aspects of quality of life and content areas of population education as drawn from the disciplines of population studies, demography, biomedical and social sciences.

After the lectures, the participants identified ten content areas around which textual materials

on population education can focus on. These include population dynamics, population growth and economic development, population as related to socio-cultural aspects, health and nutrition, environment, biological factors and family welfare, citizenship, employment, migration and urbanization, population growth and quality of life and lastly, population policies and programmes at national and international levels.

The theoretical part was followed by the practical exercise by which the participants developed teaching lessons consisting of specific objectives, illustrations, activities and model exercises for each of the identified ten content areas on population education.

Furthermore, the participants analysed the existing curriculum of Bachelor in Education courses in Secondary Teacher Training Institutes with the purpose of integrating population education concepts into appropriate units under theory papers as well as co-curricular activities and community work. Strategies to incorporate population education concepts in appropriate units of the existing curriculum along with teaching aids were suggested for effective integration.

In order to develop the required instructional materials more comprehensively, the participants were divided into sub-groups assigned to tackle the various ten content areas on population education.

Patna's innovative approach to population education

In addition to the routine population education activities, the Population Education Project of S.C.E.R.T. in Bihar, Patna has recently been implementing more innovative strategies in promoting the population education programme.

The first among these was the population education exhibition which was organized from 21 to

24 November 1985. The participants were selected from a district-level competition who were also the champions at selected block level competition.

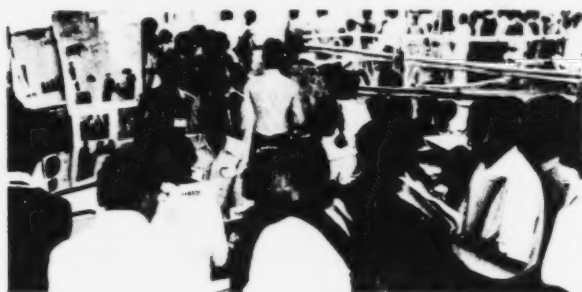
The immediate purpose of the exhibition was to involve the students and teachers at the secondary level, particularly to expose them to ideas about population education through the audio-visual media. The long-term objective was to make the children aware of the population situation and problems so that they can take rational decisions about the size of their family when the time comes.

The second innovative approach that the project plans to go into is the use of educational television to develop films on population education for the pre-dominantly tribal primary and middle schools located in five districts. Under this plan, a large number of students and teachers will be exposed to the population education situation and impact through television at a very low cost. The scripts have been prepared and the production of the film is in process.

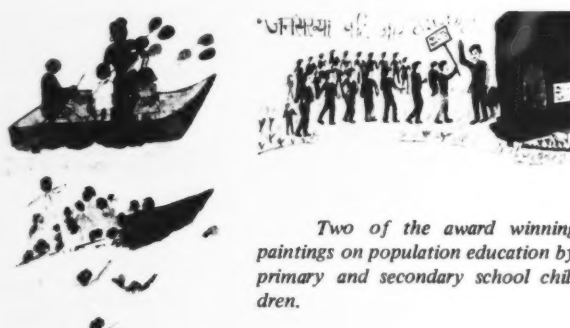
The third innovative medium that is currently being used is the science of yoga. Bihar State has been regarded as a centre of learning. In ancient times, Nalanda was an International University located in Bihar which has very rich heritage in the field of yoga science which was adopted by great scholars.

Bihar Government has included yoga in the syllabus of school and teacher education as a part of physical education. The Population Education Cell has taken up the programme of imparting training in yoga to the children as one of its activities. The first phase includes the orientation of teachers' programme.

Yoga education will enable the teachers and children to understand and adopt the natural method of limiting the high growth rate of population. It is considered as superior to the terminal



Viewers of the exhibition of paintings on population education executed by school children cut across all age groups and professions.



Two of the award winning paintings on population education by primary and secondary school children.

and non-terminal methods which are based on the medical approach.

Panjab evaluates training programme

The Population Education Project of the State Institute of Science Education in Panjab, Chandigarh has trained about 12,000 secondary and primary teachers on population education. It plans to train about 28,000 teachers more by the end of the year.



Mass scale training of teachers in a rural centre of Panjab.



State-level 'on-the-spot' painting competition on population education held outdoors for inspiration.

Before the project continues to train more teachers, an evaluation has been undertaken to assess the knowledge, understanding, attitudes and skills of the teachers who had been trained so far. The results of the assessment will guide the organizers in making changes for the improvement of the training programme.

The results of the evaluation showed that there has been an increase in the knowledge of the trainees regarding population education accompanied by a favourable change in their attitude towards population issues.

Out of the 11 topics of population education discussed in the training programme, more than 70 per cent trainees have completely understood eight topics and in the remaining three topics, more than 50 per cent trainees have gained complete understanding.

Majority of the trainees considered presentation of information on population education through lectures as an effective method, adding that the quality of the resource person was up to standards.

The training programmes also effectively removed the doubts, misconceptions and apprehensions of the trainees regarding population issues, also resulting in more awareness of their responsibility in the population education programme.

PAKISTAN

Teachers and Trainers Undergo Population Education Training Through Face-to-Face and Distance Learning Approaches

The training of teachers in population education in Pakistan is being undertaken through a two-



One of a set of 25 charts on population education for use in teacher training and teaching of population education from Classes 6 to 10.



Population education concepts are incorporated into textbooks on social studies, science, Urdu home economics, sociology and biology from Classes 6 to 10.



Reports of training workshops conducted on various aspects of teacher training and curriculum development (below). The distance-teaching approach involves sending to the trainees a set of population education source book consisting of nine study units, a study guide for trainees and tutors; assignments, radio scripts and viewing two television programmes (left).



pronged approach. One is through face-to-face training of middle and secondary schools, being carried out by the Bureau of Curriculum and Extension Service of the Ministry of Education. The second is being carried out by the Allama Iqbal Open University.

Face-to-face training

The face-to-face training is being undertaken at two levels. The first level involves six-day workshops held from December 1984 to March 1985 to train a corps of trainers or master educators. These master educators consisted of District Education Officers and Headmasters of middle and secondary schools who will be responsible for organizing teacher training programmes as well as serve as resource persons.

Four workshops consisting of 40 participants each had been held in each of the four major provinces of Pakistan, namely, Punjab, Sind, Baluchistan and Northwestern Frontier Province (NWFP).

For the second level, 12,000 middle and secondary school teachers are the target number of trainees to be trained. From September to December 1985, about 15 six-day teacher training programmes had been organized covering 7,500 teachers. By June 1986, it is hoped that all of the

12,000 teachers had been reached with population education training.

To aid the trainers in teaching population education more effectively, a Teacher's Guide on Population Education, and a set of 25 charts along with a brochure presenting guidelines on how to use the charts had been prepared.

The set of 25 charts can also be used by the trained teachers in teaching population education in classes 6 to 10. These charts cover the following concepts: population growth, population dynamics and projections, migration, effects of population on resources, housing, forest, transportation, employment, industrialization, medical services, food energy resources, ecological disturbance and other components that affect the quality of life.

For the higher level personnel, a national source book in an English version is being prepared, consisting of 17 chapters on various aspects of population education.

Distance-teaching approach

The training of middle and secondary school teachers is also being undertaken through the distance-teaching approach by the Allama Iqbal Open University.

With the objective of teaching 20,000 teachers, i.e., 12,000 middle and 8,000 secondary school teachers, the first cycle of the Population Education Course for Middle School Teachers took off the ground last October 1984 semester. The course carries a weight of a half credit course at Bachelor of Arts level.

To date, after the 1984 and 1985 semesters, about 1,000 middle school teachers had been trained.

The process of correspondence teaching starts with the 13 Regional Offices contacting the District Education Officers for nominations. These nominees are working teachers and full-time employees. Once the names are screened and selected, the staff of the Population Education Project of the Faculty of Education sends the student a learning package consisting of a source book, study guide, assignments and schedule of radio and television programme through the postal services.

The population education source book contains nine study units. These nine units deal with the following topics: introduction to population education, background statistics of population, increase of population and resources, implications of population growth on the extension of education

in Pakistan, ecology and environmental studies, promotion of population education through the teaching of Urdu and social studies and through science and mathematics, problems of population and the role of teacher and promotion of population education through co-curricular activities.

The study guide presents the objectives, introduction, rationale of the project and guidelines on how to use the source book on population education.

The students study the materials at their homes and send their completed assignments to their tutors for evaluation. Each of the nine study units are also supported by a 15-minute radio programme aired after 15 days of receipt of the materials, twice a month from 4 to 5 p.m. In addition to these, two 25-minute television programmes are broadcasted at the beginning and end of the course.

The tutors come from teacher training colleges, Ministry of Education and Curriculum Wing who are considered population education specialists. The tutors are also given orientation at the beginning of each semester and given tutor's guide to enable them to perform their functions effectively. The tutors are also responsible for marking the two assignments sent to them by the students, consisting of 40 per cent for overall evaluation and 60 per cent for final examination.

Those who face difficulties can go to the assigned study centres where they can consult their tutors on a face-to-face basis.

The Population Education Course for Secondary School teachers which will carry the weight of a half credit course at the Master of Arts level will commence in October 1986.

This course will also cover nine study units dealing with the following topics: introduction to population education, population increase and socio-economic development in Pakistan, ecology, population welfare policy and programmes in Pakistan, population education policies and programmes in selected countries, population education through the teaching of social sciences, physical sciences, and languages and population education and the role of teachers.

The process to be followed in reaching the secondary school teachers through correspondence teaching will be similar to that implemented in the Population Education Course for Middle School Teachers.

Evaluation

To determine whether the Population Education Course for the Middle School Teachers is going in the right direction, an evaluation was conducted for this purpose.

The major problems which have been faced so far in the implementation of the project, among others, involved difficulties in recruiting willing part-time tutors with appropriate qualifications, enormous time taken in securing nominations from the employing agencies, delay in getting the students and tutors materials printed and lack of motivation among students.

To improve the process of implementation, it was recommended that since 20,000 teachers are just about 6 per cent of the entire school teachers community, the target of teachers training in population education should be raised up to at least 25 per cent of the total strength of teachers.

To attract more students, the monetary incentive of Rs. 50 should be raised up to Rs. 100. Also, it was recommended that a similar orientation course should be started for college teachers as well.

'Small Family Community Guides' are Postmasters

One has heard of school teachers, barefoot doctors, midwives, grassroot level functionaries, etc. being used to promote family planning in the villages but one has never heard of Postmasters being involved in such undertaking.

Not in Pakistan. The first of its kind, Postmasters are being utilized in Pakistan to serve as social change agents to promote population-related activities in their own communities.

Why postmasters?

There are about 13,327 part-time employed Postmasters, mostly with nine to ten years of schooling. Most of them are employed as full-time teachers while some are reported to be Imams (religious leaders) of local village mosques. Receiving about Rs. 50-100 as part-time remuneration from the Postal Department, their part-time job includes receipt and distribution of daily mail and money orders.

They have been selected because they have the rapport with the community people and enjoy their confidence. They are frequently visited by individuals and are aware of their intimate family problems; sometimes, they read and write letters for others too.

Their number is sufficiently large and dispersed to justify a distant learning strategy. Most of all, their educational levels are sufficient for seeking, utilizing and disseminating information obtained through the print. As such, the Postmasters have the potential for developing into effective change agents in their communities.

Distant learning course

To train the Postmasters in carrying out their task competently, a short-term distant learning course is being undertaken by the Allama Iqbal Open University. While the Post Office Department mainly provides the nominations and the Population Division provides the necessary funds, the Allama Iqbal Open University prepared the learning materials, ensures its utilization and awards certificates.

The distant learning course consists of two levels. The first level course aims to help participants develop an insight into Pakistan's present population situation and its macro level implications; acquaint them with the benefits of a small family norm and the way population increase affects people's quality of life and to impart them certain motivational and communication skills.

The second level course will acquaint the Postmasters with different birth control methods, their use and side effects and to familiarize them with sales procedures, referral of semi-terminal and terminal clients to Family Welfare Centres and maintenance of a relevant record.

The first level course runs for four weeks and is being undertaken by all participants while the second level course is optional and runs for three additional weeks that will enable the participants to earn an additional certificate.

It is expected that those who finished the first level will help create an awareness of the rapid population growth and its implications and acquaint the people of the benefits of a small family norm in the community.

On the other hand, those who finished the second level course will help eligible couples in planning their families by introducing and explaining to them different semi-terminal and terminal methods, their use and side effects, carry out their sale and refer clients to Family Welfare Centres.

Training materials

To carry out the course, small digestable quantity of self-instructional illustrated materials are being sent to the participants every week.

The main study materials consist of six booklets. Booklet 1 deals with population growth, beliefs and practices and effects of rapid population growth on various aspects of quality of life. Booklet 2 deals with the advantages of small families and disadvantages of big families. Booklet 3 focuses on interpersonal communication and effective techniques of conveying messages to others. Booklet 4 covers different semi-terminal and terminal methods, their use and side effects. Booklet 5 explains sales procedures, functions and services of Family Welfare Centres, referral of semi-terminal and terminal clients and how to maintain relevant records. The last is a Work Book which consists of various learning activities covering and integrating contents of above 5 booklets.

The participants will be sent one booklet each per week together with a feedback reply paid card. During the third week, one assignment will be given to evaluate trainees' knowledge gain. During the end of the third week, the participant will be asked whether they will want to go on to the second level course.

Ensuring students interest

To ensure students interest, the organizers are in regular touch with the participants, by initially congratulating the participants on their selection; by promising that the university will award them a participation certificate; by asking them to fill out the reply paid feedback cards; by offering them a fee for the referrals and a share in the sale proceeds; by awarding another attractive certificate after a three weeks' additional study and by regular contacts between the field functionaries of the Population Division and the participants.

Pilot phase

The pilot phase covered 1,000 branch Postmasters in thickly populated areas, namely 300 from Punjab, 200 from NWFP, 200 from Sind and 100 from Baluchistan. From among these participants, those who showed keener interest were invited to attend the first of a series of face-to-face two-day orientation workshops in Allama Iqbal Open University, Islamabad last 13 to 14 October 1985.

PHILIPPINES

Population Quiz Show Generated Nationwide Interest and Participation

In order to generate awareness of population and development issues among the youth and the



general public and to develop positive values and better understanding of the national population programme, a population quiz show was held in the 13 regions of the Philippines.

The population quiz is a school-based project. It is open to members of the graduating class of any duly recognized general or vocational high school in the Philippines. The contest started at the school level. Winners from the school level contest competed at the zone level and winners at the zone level were the contestants at the division level. All division champions competed at the regional level contests which were held on various dates last October. Finally, the 13 regional champions competed in the National Population Quiz Show last 23 November 1985.

The questions asked during the contests were prepared by the Division and Regional Population Education Programme Co-ordinators with the assistance of Co-ordinators from the Commission on Population. The subject areas included the following: (a) population programme thrusts, objectives and strategies; (b) partner and participating agencies; (c) population concepts and messages; (d) family planning methods and techniques; (e) population dynamics and demography and (f) human sexuality.



In preparation for the National Pop Quiz Show, regional level quiz contests were held to select the best regional entries to the national level. Photos show population quiz shows in Region I and Region III of the Philippines.

Cash prizes have been awarded to the first, second and third winners during the division level in the amount of pesos equivalent to US \$27, US \$16 and US \$11. During the regional population quiz, US \$55 and a trophy were awarded to the regional champion, \$38 and a trophy to the first runner-up and \$27 and a trophy to the second runner-up. Non-winners were awarded a gold medal as division champion and US \$5 each.

In the national championship, a cash prize of \$388 shall go to the national champion, \$277 to the first runner-up and \$166 to the second runner-up. Non-winners shall each be awarded \$27.

THAILAND

Four Modules Developed to Teach the Course on Population Situation and the Improvement of Quality of Life

Population education is being offered as a major and a minor course in the four-year degree programme for the training of teachers. Another course on "Population Situation and the Improvement of Quality of Life" is also being offered by some teacher training colleges as an elective course in the first two years of the general education four-year degree course. The Department of Teacher Education plans to offer this course in all the 36 teacher training colleges in Thailand.

To pave the way for this, the Department of Teacher Education prepared modules on all the four units of the course. These modules can be used by teacher educators, teacher trainees and teachers.

The first module was developed in 1984 and completed in early 1985 while modules 2, 3 and 4

were developed from June to August 1985. They all came in draft forms.

To refine and finalize these draft modules, a workshop was organized by the Department of Teacher Education in Pattaya from 5 to 10 September 1985. It was attended by about 30 participants from teacher training colleges and the Department of Teacher Education.

The first module focuses on the topic of Lesson One which is on understanding quality of life. It covers topics such as the meaning of quality of life, the components of quality of life and criteria for the evaluation of quality of life both at the world and local levels.

The second lesson which focuses on population situations and quality of life was decided during the workshop to be taught, using three sub-modules instead of one. These three sub-modules cover three sub-topics, namely: Meaning and components of population situation; Population situations in Thailand; and the Relation of changes in population situation and economic, political and social conditions. The participants of the workshop were divided into three groups to work on these three sub-modules.

As for Lesson Three which deals with decision-making policy on population-related issues for the improvement of quality of life: the group decided to come out with only one module. Six population-related issues were selected for inclusion in the module. These include mate selection, marriage, sex preference of the child, family size, migration and occupation. The participants were again divided into three groups and each group was given two topics to illustrate the decision-making process.

Module Four for Lesson Four which focuses on self-conduct towards quality of life will be developed at a latter time.

The course on population situations and the improvement of quality of life aims to educate students on the effects of population changes upon the individual quality of life, his family, community and nation; train students on decision-making policy in population-related issues and on the implementation of that skill and to prepare students for the role of exemplary citizens for their community, as well as the skill in arranging activities for the development of the desired traits, faith, attitudes and values.

Interdisciplinary Integration Taken Up to Enhance Quality of Life

During the last ten years, the education sector in Thailand has been incorporating and implementing various new types of education in addition to the basic courses/subjects being offered in the school and out-of-school. These include health education, population education, consumer education, drug education, etc. While these projects have specific objectives and problems to solve, they invariably have one ultimate goal — the enhancement of quality of life. To achieve this, the methods being used are basically the same, i.e., training, curriculum and materials development and evaluation.

Because of multiple sources of financing, these projects have often been conceived and implemented independently, resulting in unnecessary duplication or inconsistencies. To better orchestrate these efforts and maximize resources and impact, a national training seminar was held from 24 to 29 November 1985 in Pattaya, Chonburi.

The training seminar was organized by the Ministry of Education in collaboration with Unesco to identify various educational contents related to quality of life and environment which are already part of and which should be included in the in-school and out-of-school curricula. It was also aimed at promoting interaction and co-operation among concerned agencies with regard to materials development, information dissemination, personnel training, research, etc.

Thirty-seven participants from 21 departments and voluntary organizations attended the training seminar who exchanged experiences with regard to their achievements in promoting quality of life among Thai people, modalities and problems related to planning, curriculum and materials development, training of personnel, research and monitoring.

The participants were later divided into two groups, e.g., in-school and out-of-school groups, to discuss, more in depth, possible inter-agency and interdisciplinary projects or activities designed to maximize efforts, time and financial resources.

The in-school group decided to develop projects in the areas of materials production, training, materials dissemination and evaluation on the following quality-of-life areas: health education, nutrition education, sex education, narcotics control, accident prevention, population education,

environmental education, consumer education, moral education, arts and culture and career and occupation.

In the non-formal sector, the group formulated activities in the fields of curriculum development, training, materials development and demonstration programme revolving around the focal themes of the Basic Minimum Needs (BMN) recently launched by the Government. These BMN require that family members have nutritious food, appropriate housing with pleasant environment, enjoy basic social services, are safe and secure, people's food production capabilities are effectively and efficiently mobilized, people actively parti-

cipate in community development, their spiritual values are developed, and small size family norm is accepted.

To ensure the implementation of these action programmes, the participants recommended among others, the following: to establish an organizational mechanism to plan and co-ordinate these action programmes; to provide training to trainers and facilitators of quality of life and environment; to develop appropriate teaching materials and teaching methods; to monitor and evaluate the programmes; and to set up provincial management body for effective co-ordination at the grassroots level.

DISCUSSION FORUM

POPULATION EDUCATION: DEVELOPMENT AND PROSPECT

Introduction

Rapid population growth is more evident in Asia and the Pacific region than in other regions of the world. It is estimated that by the year 1990, 58.8 per cent of the world's population shall live in Asia and the Pacific.¹ It is to be noted that if not for the sharp decrease in the birth rates in East Asia, particularly China and Japan, there would have been a bigger proportionate percentage increase in the number of people living in the region of Asia and the Pacific.

For this reason, many countries in the region have already adopted an anti-natalist population policy. These countries have also adopted programmes to rationalize population growth. The two main approaches to curb rapid population growth, which have been launched are what Weller and Bouvier refer to as family planning and non-family planning intervention strategies.² Both main approaches shall be discussed briefly in this paper.

Family planning

Family planning means simply "planning on the part of women, men and couples to have the number of children they want when they want them."³ By the mid-1960's, most countries in Asia had established national family planning programmes, the predominant rationale of which was demographic in nature. The paramount concern was that rapid and unplanned population growth

was outstripping development efforts. In a few countries in the region, family planning is also advocated on human rights ground — that is the right of parents to decide whether or not to have children or how many children they should have. However, in some Asian countries, in which the socio-cultural values do not sanction birth control, family planning is often promoted for the sake of maternal and child health.

Non-family planning approach

Among the non-family planning approaches to lowering fertility rates are development and modernization, incentives and disincentives, increased labour participation of women and population education. There are enough evidence to show that development and modernization contribute to the lowering of fertility rates. In some countries, incentives and disincentives for having less children contributed to smaller family size. Furthermore, in many developed countries, females who participate in the labour force tend to have fewer children. Population education is one of those programmes beyond family planning.

Population education: its development

Very often, it is in countries where family planning is a sensitive issue that population problems remain most serious. It has been recognized that the usual family planning information, education and communication (IEC) is not enough to motivate many families to rationalize their family

size. This is largely because pro-natalist fertility behaviour is deeply rooted in socio-cultural values, hence the urgent need for an educational programme built into the country's formal and non-formal education system. In 1969, Sloan Wayland suggested the use of the term population education for such educational programme for he thought the substantive content and focus "was different from sex education and family life education."⁴

However, the idea of population education, though not referred to as such, came into being much earlier. J.E. Jayasuriya points out that in 1941 Alva Myrdal, in her book *Nation and Family*, suggested that education could influence the children through the schools, and adults through other educational agencies to appreciate national population goals.⁵ In 1942, Kenneth Rehaeg wrote an article in *Social Education*, a monthly journal of the National Council for the Social Studies, an expanded version of which appeared in a pamphlet in 1943, advocating the inclusion of population issues in the social studies curriculum. The concern at that time was the trend in the United States of America towards a great decrease in population.

In 1962, Philip Hauser in his article *Population - Gap in the Curriculum*, urged the inclusion of population contents in the school curriculum. At that time the concern was different to that of unprecedented rapid population growth.

The rate of population growth in many Asian countries remain relatively high. These include countries where pro-natalist socio-cultural values are quite prevalent, such as those listed in Table 1.

Table 1. Countries with high rates of growth*

Country	Rate of growth
Maldives	2.94
Iran	2.86
Pakistan	2.73
Bangladesh	2.69
Malaysia	2.50
Philippines	2.47

* Source: 1984 ESCAP Population Data Sheet

In the above-cited countries, Islam and the Roman Catholicism appear to be potent forces behind the people's pro-natalist value behaviour standards. Islam, *per se*, does not, however, make people pro-natalist, for if it were so Indonesia,

which is predominantly Muslim, would not have attained a relatively successful family planning programme, and a lower rate of population growth i.e. about 1.77 per cent in mid 1985. (UNFPA World Population Wall Chart, 1985). Similarly, three of the first seven countries that have in fact attained population growth stabilization as far back as 1980 are Roman Catholic countries (e.g. Luxembourg, Austria and Belgium). It, therefore, seems that deeply entrenched socio-cultural values rather than religious beliefs alone, appear to be the underlying reasons for the resistance to family planning and the limitation of family size.

Population education: misconception

Perhaps, the best way to overcome pro-natalist values is through education - preferably population education. However, because population education was evolved in many countries where there are serious population problems (e.g. Bangladesh, China, India, Indonesia, Nepal, Pakistan, Republic of Korea, Philippines, Sri Lanka, Thailand, and Viet Nam); and that in some of these countries a direct approach (i.e. promotes specific fertility-related attitudes and behaviour) to population education was resorted to, population education has been erroneously equated with family planning. Consequently, in some countries where family planning is a sensitive issue, population education has likewise been equally resisted. Hence, population education is rendered less effective as an instrument for the re-orientation of pro-natalist socio-cultural values.

Population education: proliferation vis-a-vis consolidation

In a Unesco paper, population education has been given the following attributes:⁶

- It is an educational programme designed to make learners understand the inter-relationship among population change/situation, development, and aspects of quality of human life.
- Its ultimate goal is to make learners contribute to the improvement of the quality of human life now and in some future time.
- It is population problem-centred, hence lends itself to discovery and inquiry learning processes.
- It is value laden, hence more open to the use of values clarification approach to learning, i.e. to pose realistic alternatives,

to examine consequences of each alternative, and to enable learners to make sound decision for action about population issues.

- e) It derives content from demography and population studies.
- f) It may include family planning and sex education.

With the development in Afghanistan, Malaysia and Burma, family life education should be added as a distinct component of population education.

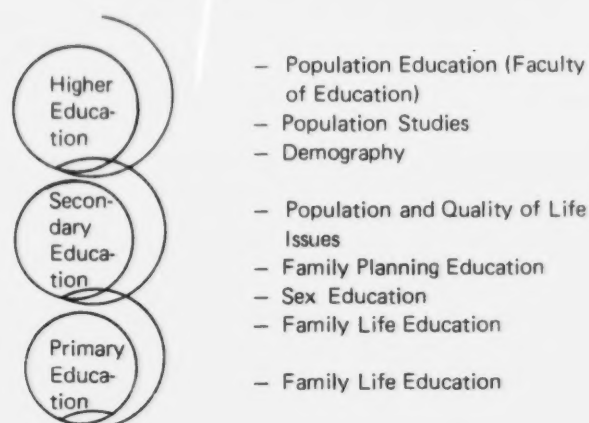
In many countries, six main programme thrusts are emerging, namely the following:

- a) Family life education;
- b) Population and quality of life issues;
- c) Sex education;
- d) Family planning education;
- e) Demography;
- f) Population studies.

A crude analogy is the division of social science or social studies into anthropology, civics, economics, geography, history, political science, and sociology.

Spiral curriculum

In a few countries, a spiral population education programme appears to be emerging as shown in the diagram above.



Family life education. Parts of the spiralling scheme are not clearly delineated as yet. The fact is that in the early years of schooling (i.e. primary school) micro-level population concepts are the focus of the teaching/learning process. The learning process usually starts from those that are within the range of the learners' personal experiences.

The bulk of these micro-level population concepts constitutes the core of family life education.

Family life education has been interpreted in many ways — from simple to elaborate conceptualization. At its most simple form, it connotes learning about the roles and responsibilities of every member of the family. Such topics are usually the focus of population education/family life education in the primary school level.

Family life education, at the more involved coverage is perceived "as catering for individual needs leading to personal growth and enabling the individual to function as a responsible member of the family and society. This includes the ability to cope with the physical and emotional changes associated with growing up, establishing and maintaining satisfying relationships with family, friends and society at large, developing values and skills for successful marriage and child-rearing, and playing positive roles with the family, community and society in the face of changing social conditions."⁷ Much of the concepts embraced by this definition are taken up at the secondary school level and among out-of-school youth/adolescents.

Sex education. In a few countries, sex education is offered at the junior and/or senior secondary school levels. This is usually in the context of the study of human reproduction, which is invariably a learning unit in the biology course. It is often mainly concerned with human sexuality, human reproduction and sometimes ethical issues relevant to sex-related morality.

Family planning education. This is synonymous to the educational component of family planning IEC. It is precisely because family planning IEC has an educational component that population education is juxtaposed with it. In some countries, at the later stage of schooling when students are on the adolescent stage, family planning education is an integral part of the population education curricular offerings.

Demography. Demography deals with "the quantitative study of human population and the changes in them that result from births, deaths and migration."⁸ This has long been offered as a series of courses in higher education. In the 1970's, demographic concepts and measurement constituted a major chunk of population education programmes (e.g. census, population composition size, distribution, fertility, growth rate, birth and death rate, migration, demographic transition, etc.). Unfortunately, much of the demographic concepts

were associated with the threat posed by massive quantity of population. Hence, the cliché at that time was "A small family is a happy family," which runs counter to socio-cultural values of many countries in the region. Lately, the emphasis in many population education programmes are aspects quality of life.

Population studies. This "covers the body of knowledge, concepts and theories which describes and attempts to explain the dynamics of human population and their relationship with the social, cultural, economic, political and biological environment."⁹ In many universities, population studies stress the creation of new knowledge rather than the passing on of existing knowledge about population-related issues. Findings of population studies have been utilized to enrich population education programmes.

There seems to be no doubt, however, that population education will remain the over-arching term for the educational programme design to help cope with population-related problems, the major substantive components of which shall include the following:

- a) family life education;
- b) sex education;
- c) family planning education;
- d) demography;
- e) population studies.

Putting all the above together, however, is not sufficient to cover all the substantive components of population education, in as much as none of the above adequately deals with the inter-relationship of population change *vis-a-vis* development and aspects of quality of life (e.g. economic development and aspects of quality of life e.g. economic development, education, environment, resources, employment, food and nutrition, health, housing).

Population education: is there hope for the future?

From 1972 to 1985, 24 countries in Asia and the Pacific launched national population education programmes, largely encouraged and sustained by UNFPA funding support and technical assistance from Unesco. From 1970 to 1978, the main concern was its *acceptability* and *feasibility* as the education sector's contribution to a multi-disciplinary intervention strategy for curtailing unplanned population growth. From 1979 to 1985, the main concern was accountability — to show the effects and impact of population education on the target clientele — in the formal and non-formal education sectors. It appears that from 1986 on-

ward, the issue shall be that of *survival*. UNFPA and Government funding support to the programme seem to be declining vis-a-vis family planning programme. In a few countries, population education is almost fully supported by UNFPA funding. With the gradual phasing out of UNFPA and other international funding support, will financial support to the programme be taken over by Governments? Could the Government of developing countries afford it? Is it a priority educational programme?

The scenario appears to be bleak as so far very few Governments in the region include population education in their educational development plans. However, the Fifth Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia and the Pacific which was organized by Unesco with the co-operation of ESCAP in Bangkok from 4 to 11 March 1985 provided a note of optimism for the programme. One of the resolutions unanimously adopted by the Conference is about population education, which *inter alia* recommends that the population education programme be made an integral part of national education development plans of Member States in Asia and the Pacific. If, indeed, Member States pursue this recommendation, population education shall have a brighter future in the region.

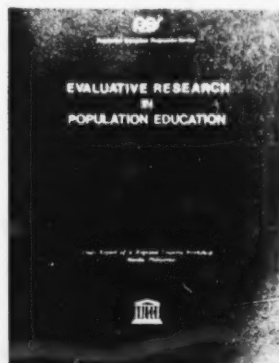
Footnote

1. United Nations 1982 Assessment.
2. Robert H. Weller and Leon F. Bouvier. *Population: demography and policy*. New York: St. Martin's Press, 1981.
3. John A. Ross, ed. Editor-in-Chief. *International encyclopedia of population*. New York, The Free Press, 1982. p. 205.
4. Sloan R. Wayland. *Population education in developing countries* in T.S. Mehta, B.S. Parakh and R.C. Saxena (eds). *National seminar on population education*. 1969. p. 18.
5. J.E. Jayasuriya. *Population education: an overview of its goals and nature*. Paper delivered in Sierra Leone in 1981.
6. L. de la Cruz. *Towards a better understanding of population education* in Population Education in Asia and the Pacific Newsletter, No. 22, July 1985.
7. Family Planning Association of Malaysia. *A curriculum on family life education for youth organizations*. Kuala Lumpur, May 1985. p. 7.
8. John Ross, *op. cit.* p. 147.
9. Unesco. *Population education: a contemporary concern*. 1978. p. 43.

PUBLICATIONS IN CIRCULATION

1. *Evaluative research in population education.* Unesco, 1985. In English.

This manual is the outcome of a Regional Training Workshop on Evaluative Research in Population Education organized by the Unesco Regional Office for Education in Asia and the Pacific in the Philippines from 20 to 31 May 1985. The manual gains special significance considering the fact that most population education programmes in Asia at present have reached a stage where a considerable amount of programme inputs have been invested into programme implementation and their effects or impact need to be determined. For this reason, the manual does not encompass the whole gamut of research but appropriately focuses on monitoring and evaluation which are the recognized needs in the region.



The manual serves as a wealthy resource material for distinguishing between monitoring and evaluation, the difference in the scope or coverage of the two, their functions or uses and types of evaluation. On a more practical level, the various types of evaluative designs are explained. These include non-experimental, experimental and quasi-experimental designs. To put these designs in the context of population education, five concrete evaluative designs are presented, three in the formal population education and two in the non-formal population education. The three in the formal sector includes a pre-experimental design which ascertain the effects of the population education programme on the level of knowledge and attitudinal characteristics of the secondary school teachers teaching population education; an experimental design which compares the effectiveness between lecture-discussion and teaching with slides in the teaching of population education to secondary school students; a quasi-experimental to ascertain the effectiveness of an innovative approach to in-service training of middle school teachers of population education. In the non-formal sector, the two includes an experimental design to determine the relative effectiveness of face-to-face vis-a-vis self-instructional in the training of non-formal education teachers and a quasi-experimental design on the effects of a non-formal population education programme on the knowledge of and attitude towards responsible parenthood and family planning of adults attending literacy classes in a community.

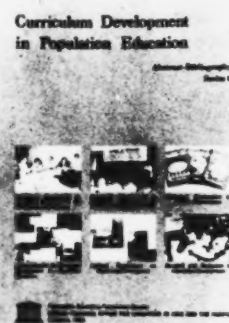
These evaluative designs do not only explain the methodology to be used but also include the actual questionnaires, how to tabulate the data gathered and the corresponding data analysis techniques. These information

make the sample designs easier and readily convenient to apply. The final parts of the manual also gives a very understandable explanation of the various data analysis techniques including tabulation and statistical analysis and the guidelines for writing a research report.

For a copy, please write to Population Education Clearing House, Unesco Regional Office for Education in Asia and the Pacific, G.P.O. Box 1425, Bangkok, Thailand.

2. *Curriculum development in population education: abstract-bibliography series 6.* Unesco, 1985. In English.

This issue, which is the sixth in a series of abstract-bibliographies dealing with various problems in population education, is addressed to the issue of curriculum development in in-school and out-of-school population education. Curriculum development is the most important component of a population education programme. Despite curriculum development efforts by the countries, institutionalizing population education into the systems has been a difficult task. Many reasons account for this. First, this is a subject through which not only some knowledge is to be imparted, but also new attitudes and values are to be inculcated. Most of these values are deemed controversial in nature. Second, the existing curricula at all school levels are already so overcrowded that it becomes very difficult to integrate population education content.



Second, the existing curricula at all school levels are already so overcrowded that it becomes very difficult to integrate population education content.

This series addresses itself to this problem. It abstracts and reviews 70 publications which present the definition, nature and scope of curriculum development in population education, the guiding principles and procedural steps to be followed in curriculum development both in the formal and non-formal sectors; and the national experiences as well as the state-of-the-art on curriculum development programmes in Asia and the Pacific. These publications document how countries have instituted population education into their school curriculum, the problems encountered and the solutions formulated to resolve these problems. Most importantly, this volume attempts to show the changing direction and trends being followed by the countries from developing curriculum materials in either a very saturated or elaborate form or diluted and spread out too thinly to focusing on just a set of adequate minimum learning requirements designed to attain desired cognitive and behavioural outcomes of each grade level. The time span of publications is from 1969 to 1984. The publications which have been selected here are not curriculum materials but they describe the processes and experiences; and the theoretical as well as practical discussions of curriculum

development. Some of these publications include lessons and actual curriculum materials to illustrate the discussions. These publications have been grouped into six parts: Part One – Strategies for Curriculum Development in Population Education in the Formal Education System; Part Two – Strategies for Curriculum Development in Population Education in the Non-Formal Education System; Part Three – Development of Curriculum Materials in Specific Subject Areas; Part Four – State-of-the-Art on Curriculum Development in Population Education in Asia and the Pacific; Part Five – National Experiences on Curriculum Development in Population Education; Part Six – Research and Evaluation in Curriculum Development in Population Education.

For a copy, please write to Population Education Clearing House, Unesco Regional Office for Education in Asia and the Pacific, G.P.O. Box 1425, Bangkok 10500, Thailand.

3. Learning experiences in population education: Volumes I, II and III. Unesco, 1985. In English.

This prototype package of curricular materials in population education is the main outputs of the Regional Workshop for the Development of Packages of Adequate Learning Requirements in Population, which was organized by the Unesco Regional Office for Education in Asia and the Pacific, in collaboration with the Ministry of Education, Thailand. Held in Chiangmai, Thailand, from 17 to 30 July 1984, the workshop was organized in accordance with one of the recommendations of the 1982 Regional Consultative Seminar in Population Education, which noted *inter alia* that one of the shortcomings of country programmes in population education is that the population content integrated in school subjects and out-of-school programmes is quite inadequate in bringing about desired attitude changes regarding population issues and problems. This is largely because population concepts tend to be spread too thinly

in too many school subjects and out-of-school education programmes. In so doing, the message tends to be diluted and rendered less effective. The participants of the 1984 Regional Workshop developed prototype packages of learning materials in population education in an attempt to remedy the situation.

This prototype package consists of three volumes. The first volume summarizes the proceedings of the workshop detailing the trends, problems and recommendations and most importantly, the core messages and general guidelines for developing minimum learning experiences in population education both for the formal and non-formal sectors. The second volume is a package of curricular materials which integrate population education into social studies and science in the secondary school level. This volume consists of (i) a report of the pre-testing of the sample materials; (ii) a set of guidelines for its development and use; (iii) a proposed secondary school population education curriculum based on the population programme's Information, Education and Communication (IEC) core messages; (iv) teachers' guides, with test items to assess knowledge gain, attitude change and behavioural intent; and (v) learning materials for students (i.e. textual materials with appropriate illustrations). The third volume is meant for the out-of-school education programmes particularly intended for the out-of-school youth. This package consists of: (i) a set of guidelines for its development and use; (ii) population education curriculum built around the Information, Education and Communication (IEC) core messages; (iii) user's guides; (iv) learning materials for literate out-of-school youth, including stories/booklets, posters and charts; and (v) survey instruments for assessing the interest, needs and problems of the community, and evaluative research instruments for pre-testing the reading materials and posters.

For a copy, please write to the Population Education Clearing House, G.P.O. Box 1425, Bangkok 10500, Thailand.

RESEARCH AND EVALUATION IN POPULATION EDUCATION

PROTOTYPE EVALUATIVE RESEARCH DESIGNS FOR POPULATION EDUCATION

One of the outputs of the Regional Training Workshop on Evaluative Research in Population Education, organized by the Unesco Regional Office for Education in Asia and the Pacific held in the Philippines from 20 to 31 May 1985 was a set of programme monitoring schemes and evaluative research designs accompanied by data gathering

instruments/tools and data analysis techniques on different problem areas in population education. Below are two of these evaluative research designs, one for the formal and another for the non-formal population education.

Experimental Design (Formal Population Education)

Title: *The relative effectiveness of two techniques of teaching population education to secondary school students* (7th grade)

Rationale

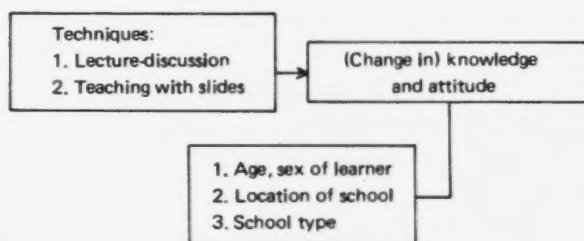
Although, there is a wide array of teaching techniques, only a few evaluative researches have been conducted to assess the relative effectiveness of one method *vis-a-vis* other methods, as far as population education is concerned. Hence, this proposed study.

Objectives

1. To measure the effects of using (i) lecture-discussion and (ii) teaching with slides on the knowledge and attitude of students.
2. To determine if there is a significant relationship between respondents' demographic characteristics and type of school, on the one hand, and their knowledge and attitude concerning population, on the other hand.

Conceptual framework

Illustrated below is the conceptual framework of the study:



Scope

Focus will be on the concepts of population growth and economic development. These are as follows:

1. Population trends in the community.
2. Effects of rapid population growth on the age structure of a community.
3. Implications of young population on the economic development of the community.
4. Relation between per capita income and economic development.

Procedure

Materials about the concepts will be taught to the four groups by the same teacher for one month.

The pre-test will be administered to the first group before it is exposed to teaching with slides. The second group will also be given pre-test, then subjected to lecture-discussion. Both groups will take the post-test. The third group will be exposed to teaching with slides while the fourth group will have lecture-discussion. Both groups will take the post-test.

The research instruments will be knowledge and attitude tests covering the topics on population growth and economic development.

Hypotheses:

1. The mean scores of students exposed to teaching population education with slides will differ from those taught by lecture-discussion.
2. There are differences in the attitudes of students in the two groups toward certain population issues.
3. There are significant relationships between the respondents' demographic characteristics and type of schools on the one hand and their knowledge and attitude on the other hand.

It is expected that the results of the study will show the relative effectiveness of the two techniques on knowledge gain and the development of attitudes in 7th grade students.

Methodology:

1. The study will use the multiple group, alternate pretest-post-test design which is illustrated below:

		Time →		
Experimental ₁	[R]	0 ₁	x	0 ₂
Control ₁	[R]	0 ₃	x	0 ₄
Experimental ₂	[R]		x	0 ₅
Control ₂	[R]		x	0 ₆

Legend:

- 0₁ and 0₃ are pretests.
 0₂, 0₄, 0₅ and 0₆ are post-tests.
 X = teaching with slides.
 X = lecture-discussion.

The design is sometimes called the Solomon Four-Groups Design. It is chosen because the pre-test will serve as an initial measure on which to base change or gain in knowledge and attitudes of the respondents subjected to two teaching techniques. Practice test effects or test sensitization which may affect the post-test (if any) can also be observed by comparing the post-test scores of the four groups.

The design stresses these two criteria: (i) randomization and (ii) presence of a comparison group (control and experimental).

Subject. The subjects of this study are 7th grade secondary school students. In one school, 200 students will be randomly selected. The 200 students will be randomly divided into four groups, then randomly assigned to E1, C1, E2 and C2 groups.

Experimental Design (Non-Formal Population Education)

Title: *The relative effectiveness of two modalities of non-formal education (NFE) teacher/tutor training in population education*

Rationale

Many countries of Asia and the Pacific are concerned about the adverse effects of rapid population growth on quality of life. There is a general recognition that an educational intervention in the form of exposure to population issues and problems could sensitize children, youth and adults to the importance of moderate fertility behaviour. In-school programmes of population education have already been launched in several countries, but there are many youth and adults who have not been exposed to population education for a variety of reasons, and it is necessary to reach them through NFE programmes. For this purpose, it is necessary to train teachers/tutors. In view of the fact that different modalities of training may not be equally effective, it is important for programme staff to ascertain which modalities are effective. The study seeks to determine the effectiveness of two popular modalities, namely, face-to-face teaching and teaching using a self-instructional modality.

Objectives

- i) To assess the relative effectiveness of face-to-face training and teaching using self-

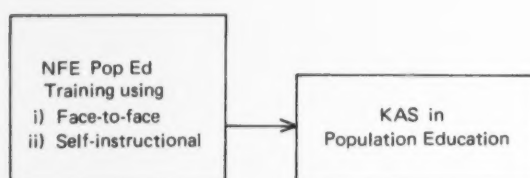
instructional modality for training teachers from rural areas to teach population content in NFE programmes.

- ii) To identify changes that are necessary in one or the other modality to improve it.

Conceptual framework

After the training, teachers/tutors are expected to acquire knowledge, attitudes and skills (KAS) to teach population content effectively in NFE classes either through integration or as a separate course, the training modalities employed being face-to-face teaching and teaching self-instructional training scheme.

The conceptual framework is illustrated in the model below:



Hypotheses

This study posits the following hypotheses:

1. The mean scores of NFE teachers/tutors taught using the self-instructional training modality will differ from those trained using the face-to-face modality.
2. Mean scores in attitudes of teachers/tutors trained using self-instructional modality will differ from those trained in the face-to-face modality.
3. The self-reported skills of NFE teachers/tutors trained in the self-instructional modality will differ from those trained in the face-to-face modality.

Methodology

Design — Experimental. The true control group, pretest-post-test design will be used in this study. The design is illustrated in the diagram below.

	→			
		Pretest		Post-test
Self-Instructional Training	(R)	O ₁	x	O ₂
Face-to-Face Training	(R)	O ₃	x	O ₄

Where O₁ and O₃ = Pretests

O₂ and O₄ = Post-tests

X = Self-instructional training modality which is the treatment

X = Face-to-face training modality, the alternate programme.

Variables measures — The independent variable or the treatment variable in the study is *self-instructional training modality*. This refers to a scheme whereby teachers are trained through modules which contain population and population education contents and a *Manual on non-formal population education for use of NFE teacher/tutors*. The content of this experimental modality is parallel to that of the usual face-to-face training scheme.

The trainees shall study the materials on their own and this self-study is interfaced with sessions with a trainer for discussions/explanations of learning points and reinforcement of learning through film showing and lectures by resource persons. The duration is eight weeks.

The alternate programme is the face-to-face training modality. This is the treatment given to the control group. The scheme is the usual modality by which NFE tutors/teachers are trained. The duration of the training is six to seven days.

The dependent variables are knowledge, attitudes and skills in population education. Their definitions are given below:

Knowledge in population education refers to scores in a population education test administered to the trainees. The items of knowledge include population information in the areas of the core messages of the national population programme. These are (a) family size and family welfare; (b) delay marriage; (c) responsible parenthood and family planning; and (d) population and other development concerns.

Attitudes in population education refers to scores in an attitude rating scale, administered to the trainees. The attitude items include statements of beliefs and opinions related to population and related issues.

Skills in population education refers to ratings of perceptions of help needed by NFE tutors/teachers with regard to certain tasks in teaching population education.

Respondents

One hundred and twenty NFE tutors/teachers randomly selected and assigned to experimental group (Self-instructional) and control group (Face-to-face) shall constitute the respondents of the study.

Sampling

A rural community will be selected from the census blocks using purposive sampling following a set of criteria, e.g. community with the most number of untrained teachers/tutors, rural community, etc. Afterwards, the 120 teachers/tutors will be chosen from a roster using the table of random numbers.

The selected samples will then be broken into two groups (Experimental and Control) by drawing lots or by tossing a coin. A group of 30 shall constitute a class size. Hence, there shall be two classes in the experimental group and two classes in the control group. Training using self-instructional and the alternate programme shall be conducted simultaneously.

The four trainers who will conduct the simultaneous training programmes shall be selected and made comparable in terms of educational qualification, experience in teaching non-formal education, previous training in population education, performance rating and age.

Research instruments

A questionnaire on knowledge, attitude and skills (KAS) in Population Education is the main instrument for gathering the relevant data.

The following steps will be followed in the preparation of the instrument:

1. Prepare a table of specifications based on the training design for NFE tutors/teachers in order to determine the coverage of test items.
2. Pretest the instruments on an equivalent group.
3. Revise and finalize the instruments.

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